

REMARKS

By the Office Action of mailed August 1, 2005, Paper No. 07282005, Claims 48-54 are pending.

Applicants thank Examiner Tawfik for the telephone interview permitted to discuss and clarify the Office Action and the current rejections of the claims as reflected in the Interview Summary mailed September 16, 2005. More particularly, Applicants' attorney presented the points that "guiding plates" do not provide the function of permanently sealing the tabs. They do not serve to join the tabs, nor do they provide surface sealing as recited in claim 45. Moreover, it was pointed out that Neri does not disclose the order of the steps in claims 45 and 48 in which the side tabs and end tabs are pre-sealed before any of the tabs are permanently sealed.

1. The Claim Rejections Under 35 U.S.C. §103(a)

Claims 45-52 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Neri et al. (U.S. 5,701,725) in view of WO 9856662A. Claims 53 and 54 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Neri '725 and WO '662 further in view of McDaniel (U.S. 4,256,526).

Applicants respectfully request reconsideration and withdrawal of the rejections. As set forth below, the rejections are respectfully traversed. None of the cited references, either taken alone or in combination, teach or suggest all of the features recited in the claims. Therefore, the claims are in condition for allowance.

A. The Subject Matter of the Claims

There are only two independent claims among the claims presently pending, namely claims 45 and 48. The claims are directed to a process for folding and sealing an outer wrapper on a dimensionally stable pack. The film wrapper is, as is generally the case, configured such that partially overlapping folding tabs, which are to be connected to each other, are formed in the region of three pack sides, namely the overlap 22 at a narrow longitudinal side, as well as the "envelope-type fold" in the region of the end wall 18 and base wall 19. All three regions undergo

two sealing steps. In a first thermal sealing step, the folding tabs in question are "pre-sealed", first in the region of overlap 22 of the side tabs and afterwards in the region of the end wall 18 and base wall 19. After the three pack sides are pre-sealed, the three pack sides with the folding tabs of film are then sealed a second time, i.e. a "final" or permanent sealing in which they are subjected to heat and pressure.

Accordingly, with respect to the pre-sealing steps, the outer wrapper is completely folded and all formed folding tabs are connected to each other by the pre-sealing step such that every subsequent application of heat to the film, namely the final sealing, is incapable of deforming or displacing the film as a result of shrinkage. As shown in the Response and Amendment mailed December 23, 2002, an immediate "full sealing" in the region of overlap 22 results in an undesired deformation of the film by shrinkage. This is avoided by Applicants' double sealing process with its pre-sealing and final sealing steps recited in the pending claims.

Claims 45 and 48, thus, recite a process in which:

1.) the side tabs of a wrapper are sealed not once but twice, and the top and bottom tabs as recited in Claim 48, referred to as the transverse and longitudinal folding tabs in Claim 45, are also sealed twice; and

2.) Additionally, the order of the process steps is such that the second sealing (permanent sealing) of the side tabs in the region of their overlap presented by element 22 in Applicants' figures occurs after the top and bottom transverse and longitudinal tabs are first pre-sealed, and likewise the second sealing (permanent sealing) of the top and bottom transverse and longitudinal tabs occurs after the side tabs are pre-sealed. The second sealing of the side tabs in the region of their overlap 22, thus, occurs only in the region illustrated in, for example Fig. 1, which is in the region of the overlap of the side tabs between end wall 18 and base wall 19 of the pack and does not involve the inner transverse tabs 23 and 24 that are extensions of the side tabs, extending beyond the end wall and base wall.

B. The Cited References Fail to Teach or Support All of the Elements of the Claims

The cited references fail to teach or suggest:

- 1.) the afore-described double sealing process of the side tabs and the top and bottom transverse and longitudinal tabs of the claims;
- 2.) the order of the steps namely that all of the tabs, the side tabs and the top and bottom transverse and longitudinal tabs are first pre-sealed before either the side tabs or the end top and bottom transverse and longitudinal tabs are sealed a second time, i.e. permanently sealed; and
- 3.) the permanent sealing of the side tabs by full surface sealing as recited in claim 45 (but not in claim 48).

The cited reference (U.S. 5,701,725) to Neri has been incorrectly interpreted in the Office Action. It should be noted that Neri has been previously discussed both by way of U.S. '725 and by way of its previously cited Chinese counterpart CN 1146415A. In Neri, folding tabs of the outer film wrapper are also connected to each other by thermal sealing. However, Neri consistently employs the conventional procedure, that of once-only folding and then sealing the tabs, namely exclusively a final sealing in the region of the three pack sides (the overlap of the side tabs and the overlap of the end wall and base wall tabs). This sealing is conducted by laser devices. No other sealing device is disclosed.

The laser sealing source 52 is employed in the region of the sealing station 49 for the exclusive and once-only sealing of the longitudinal overlap-analogous to the overlap 22 of the side tabs in the claims. The sealing in Neri is carried out in this region with such thermal energy that a sufficient, permanent connection of the folding tabs is achieved. In this phase of the folding and sealing process, the outer wrapper is still not completely folded at the time of permanent sealing of the side tabs, as can be seen very clearly in Fig. 1. Due to the application of relatively high heat, an undesired shrinkage of the film can occur in this region, with the result that the deformed film poses a disadvantage for the further folding and sealing process, as shown previously.

According to Neri, the folds in the region of the end wall and base wall are also sealed by a single (laser) sealing device 50, 61, specifically by complete sealing in a single working stroke. With respect to Neri, it can be stated that all folding tabs of the film which are to be joined together by sealing are therefore completely and permanently sealed in a single sealing step. Applicant's dual steps of first pre-sealing all of the tabs and then final sealing the tabs are not even suggested by Neri.

The Office Action ignores a full reading of Neri. The only sealing devices identified in Neri are the laser devices. What are referred to as compression devices are merely folding devices that serve to fold two portions or tabs of the wrapper onto each other and hold them in place while the laser device then seals the tabs. The compression or folding devices do not constitute devices for thermally pre-sealing overlapping tabs, nor do they constitute devices for accomplishing full surface sealing of the tabs, as recited in the claims. (For example, claim 45, step e) The Office Action further misinterprets the teachings of Neri. For example, the Office Action at page 2 cites Figs. 1, 3 and 4 and the Abstract, lines 6-9 and column 2, lines 8-10 of Neri as teaching a connecting of the folded side tabs and the folded transverse and longitudinal tabs sealing "via the compressing device". A complete reading of the Abstract and also the preceding lines 4-8 of column 2, makes it clear that the compressing device serves only to superimpose one tab on top of another tab and it is the laser device that operates as the scaling device connecting the tabs. See, for example, column 3, lines 29-42, referring to "folding plate 32" and associated cam-Tappet device that "provides for positioning plate 32 as to close portion 18 of opening 17 and compress portion [tab] 22 onto portion [tab] 23 as product travels along path portion 1." The compressing device(s), therefore provide no sealing or connecting function whatsoever for the tabs.

Additionally, the Office Action, at pages 2-3, contends Neri discloses "next moving the packs upward into a pack tower, where the side tabs are permanently sealed in the region of the overlap by full-surface sealing (Figs. 1, 3, and 4; via using laser sources 50, 52 and 61 and/or by moving the packs upward as shown by arrow 46 to stacking position could be consider [sic] as a position of permanent sealing position where all the sealing lines are permanently sealed)". This statement misinterprets Neri in a number of ways. First, the side tabs are not permanently sealed by laser source 50, 52 and 61. Instead, it is the top and bottom end tabs that are sealed by these

laser sources. Second, no sealing device is identified in Fig. 1 of Neri either at or after arrow 46 which arrow represents the movement of the packs upward through the back tower. Further, the Office Action at page 3 states Neri discloses “thereafter transporting the pack laterally to a sealing path where the transverse and longitudinal folding tabs are surface sealed (Fig. 1; via guiding plates under the apparatus support and surface sealing)”. No sealing path or guiding plates are disclosed in Neri after arrow 46. Additionally, the guiding plates 39 and 40 in Fig. 1 prior to arrow 46 do not accomplish any surface sealing whatsoever. Instead, they are identified as “fixed folding plates 39” and “helical plates 40 and 41 for respectively folding portions 25 squarely onto respective surfaces 31, and portions 24 partially onto respective portions 25”. See column 3, lines 50-58.

With respect to claim 48, the Office Action, page 3, misinterprets Neri as disclosing laser beams 53 and 62 as thermally pre-sealing the overlapping side and bottom tabs. These laser beams do not serve to pre-seal the tabs. Instead, they serve to permanently seal the tabs. The Office Action further argues at the bottom of page 3 and top of page 4 that Neri discloses “permanently sealing the side tabs; and permanently sealing bottom and top tabs (Figs. 1, 3 and 4; via the compressing means holding to the pack even after the laser bema [sic] seals the packs, that could consider as permanently seal)”. No device, however, is disclosed by Neri after the laser devices that would cause a permanent sealing or connecting of the tabs.

The only device cited in the Office Action for meeting this recitation in the claims are “guiding plates”. No reference is provided to the element number(s) of any “guiding plates” that serve the function of permanently sealing the tabs (as in claim 48), let alone permanently sealing the tabs by full-surface sealing (as in claim 45). To “seal” means “to fasten with or as if with a seal to prevent tampering” or “to close or make secure against access, leakage, or passage by a fastening or coating”. See Merriam-Webster Online Dictionary. Whatever “guiding plates” are present (as none are identified by element number) do not provide for the function of fastening the tabs.

Likewise, “compressing means” referred to in the Office Action are the folding plates that serve to fold and overlap one tab on top of another tab and hold the tabs in the overlapped position while the laser device is operated to seal the tabs. The compressing means referred to at the top of page 4 of the Office Action is merely a folding device. To consider that a folding

device or a compressing device means is a sealing device first ignores the function of the folding or compressing device in Neri and second ignores the wording of claims 45 and 48 that not only recite thermally pre-sealing the tabs followed by permanently sealing the tabs but also folding steps.

The references relied upon for the rejection of the pending claims, including independent Claims 45 and 48, thus do not teach all of the steps recited in Applicant's claims. More particularly, the references do not disclose Applicants' dual sealing process or the order of the steps. They do not teach thermally pre-sealing all of the tabs before any of the tabs are permanently sealed. Nor do the guide plates or compressing means of Neri provide any surface sealing of the tabs.

Additionally, the cited references do not teach or suggest steps e, f or g of claim 45. In particular, Neri does not teach moving the packs upwardly into a pack tower where the side tabs are permanently sealed. Fig. 1 of Neri shows the sealing of all of the tabs occurs prior to arrow 46 representing upward movement of the sealed packs into a pack tower. Neri does not teach or suggest full surface sealing of the side tabs in the region of their overlap recited in step e and illustrated in Fig. 1. Nor does Neri teach or suggest transporting the pack laterally after it has moved upwardly into the pack tower to a sealing path where the transverse and longitudinal folding tabs are surface sealed, again since all tabs are sealed prior to transport upwardly into a pack tower.

C. The Problem Addressed By the Neri Reference Teaches Away From Applicants' Process

The problem addressed by Neri is avoiding the danger of burning, i.e. severing, the wrapper where it is sealed. See col. 1, lines 39-41 and col. 4, lines 42-44. This burning problem addressed by Neri teaches away from the second sealing of the same tabs carried out by Applicants' process. This is a different problem than the above-described problem addressed and solved by Applicants' process, namely undesired shrinkage of the outer wrapper before the folding tabs are completely and permanently sealed. The difference problems addressed, thus, further demonstrates that Neri does not disclose, teach or suggest the order of the process steps

recited in claims 45 and 48, mainly that all of the tabs are thermally pre-sealed before any tabs are permanently sealed.

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2. Fees

No fees are believed due as a result of this Response. The Office is authorized, however, to charge any fee deficiency in connection with this amendment to Deposit Account no. 20-0778.

CONCLUSION

In view of the comments and remarks herein, Applicants respectfully submit that all of the pending claims are in condition for allowance. Accordingly, Applicants respectfully request early and favorable action. Should the Examiner have any further questions or reservations, the Examiner is invited to telephone the undersigned Attorney at 770.933.9500 (ext. 213).

Respectfully submitted,



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